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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------|------------------|
| 09/987,374 | 11/14/2001 | Toshinori Tanaka | Q67313 | 6921 |
| 23373 | 7590 | 04/26/2004 | EXAMINER | |
| SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | AGUIRRECHEA, JAYDI A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2834 | |

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---|--------------------------------------|--|
| Office Action Summary | Application No. 09/987,374 | Applicant(s) TANAKA ET AL. | |
| | Examiner Jaydi A. Aguirrechea | Art Unit 2834 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 31 March 2004.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 2 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 2 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 3/31/04 has been entered.

Drawings

2. Figures 11-17 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. The Applicants identify Figure 11 as conventional art but not prior art. According to the definition *conventional* means:

1. Conforming to established practice or accepted standards; traditional¹;

therefore, the Figures 11-17 should be labeled as Prior Art. Moreover, the Applicants disclose and describe these drawings in the Background of the invention, and not as part of the instant invention.

¹ *The American Heritage® Dictionary of the English Language, Third Edition* copyright © 1992 by Houghton Mifflin Company. Electronic version licensed from INSO Corporation; further reproduction and distribution restricted in accordance with the Copyright Law of the United States. All rights reserved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki (US 4532449) in view of Baldwin (2632125), and further in view of Boyd, Jr. (US 5668429).

Aoki discloses an armature for a dynamo-electric machine comprising: a shaft (4); a core (8) secured to the shaft (4), having a plurality of slots extending in an axial direction formed on an outer circumferential surface of the core (8); a coil (1) comprising a plurality of coil portions (1) formed by winding wires a plurality of turns around a pair of the slots separated by a predetermined number of the slots and offsetting each of the coil portions (1) in the circumferential direction of the core (8), wherein at least one pair of adjacent coil portions (1) share a common one of the slots, a commutator (10) secured to the shaft (4), the commutator (10) comprising a plurality of segments.

However, Aoki does not disclose a plurality of equalizing connectors for permanently electrically connecting pairs of the segments that should have the same electric potential, so that each of pairs of the coil portions that should have the same electric potential has a substantially equal electrical potential.

M. J. Baldwin discloses a plurality of equalizing connectors (25, 26, 16) for permanently electrically connecting pairs of the segments (1-7) that should have the same electric potential, so

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that each of pairs of the coil portions (9, 11) that should have the same electric potential has a substantially equal electrical potential.

M. J. Baldwin's invention has the purpose of reducing the unequal voltages that may occur in the winding, this unequal voltages cause circulating currents through the windings and through the brushes, which cause unnecessary heating of the coils and brushes, tending to produce poor commutation and reduce the overall efficiency of the machine. It would have been obvious at the time the invention was made to modify the armature for a dynamo-electric machine of Aoki and provide it with a plurality of equalizing connectors as disclosed by M. J. Baldwin for the purpose of reducing the unequal voltages that may occur in the winding, this unequal voltages cause circulating currents through the windings and through the brushes, which cause unnecessary

However, neither Aoki nor M. J. Baldwin discloses that the number of vacant slots between adjacent coil portions is non-uniform.

Boyd, Jr. discloses that a number of vacant slots between adjacent coil portions are non-uniform. Boyd's invention has the purpose of optimizing the performance of the machine. It would have been obvious at the time the invention was made to modify the armature of Aoki and provide it with the non-uniform number of vacant slots between adjacent the coil portions configuration as disclosed by Boyd for the purpose of optimizing the performance of the machine.

No patentable weight has been given to the method of manufacturing limitations (i.e. "a plurality of coil portions are formed simultaneously") since "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the

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product in the product-by- process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

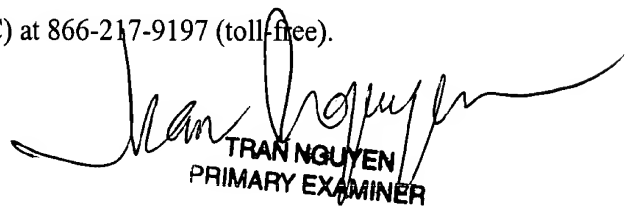
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaydi A. Aguirrechea whose telephone number is 571-272-2018. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAA
4/17/04


TRAN NGUYEN
PRIMARY EXAMINER